

EMOTIONAL RESPONSES TO SERVICE LEARNING: AN EXPLORATORY STUDY

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ABSTRACT

This study measured the emotional responses of students to common service learning activities. Two hypotheses focused on (1) expected changes in the mean emotion scores and (2) expected differences in individual responses. Results showed significant increases in Surprise, Anxiety and Distress and individual differences in Contempt, Disgust and Fear. The findings suggest that educational institutions have a responsibility to adequately prepare students for service learning experiences. There is also a need to accommodate the different sensitivities students have when service learning is required.

There is considerable emphasis on service learning in college curricula. The national average participation rate across all types of educational institutions is 34 percent (Campus Compact, 2012). Business schools and professional schools report 35 percent and 38 percent respectively of students actively engaged in service learning. Integrating service learning projects into academic coursework holds the promise of transforming students through positive connections, uniting classroom theory with "real world" applications. The opportunity to step into a service learning experience can motivate, inspire, and engage students while exposing them to some of the challenges in society.

Often these engagement activities are presented to students as a component of a class or as a requirement for graduation, more often they are volunteer activities. At select institutions service learning is heavily emphasized. One recent survey reported 93% of faith-based or minority-serving institutions include service learning in their mission statements or strategic plans. Institutions provide

a wide range of support for these activities. Universities often provide awards and scholarships to students, awards to faculty and, sometimes, require courses dedicated to service learning (Campus Compact, 2012).

Despite all the encouragement for engaging in service learning there remains 65 percent of students who choose to not participate. This relatively high non-participation rate suggests there are specific and likely unrecognized deterrents to initial or repeated participation. Because emotions play a dominant role in decision-making, it is entirely possible that emotions may be influencing students' decisions to participate in these types of emotionally-laden activities. To increase service learning participation, it may be necessary for educational institutions to recognize, understand, and manage the impact that emotions have on those students who engage in service learning activities.

AFFECT AND SERVICE LEARNING

Kiely (2005) offers a Transformational Service Learning Model that provides a framework for research in this field. He proposes five essential steps as shown in Figure 1.

Kiely's (2005) concept of contextual border crossing refers to the individual differences that influence the way students process service learning experiences. These diverse frames of reference are grounded in the unique personal backgrounds of individuals. They result in differing levels of intensity and dissonance when exposed to service learning; some of which are conducive to learning while others are not. Kiely's concept of personalization is of primary interest here. It addresses the individual emotional responses of Anger, Happiness, Sadness, Fear, and Anxiety that result from that dissonance. The service learning experiences are then processed by reflecting, problem-solving, and searching for solutions. Connecting refers to affectively understanding and empathizing "through new relationships with community members, peers, and faculty" (Kiely, 2005, p. 8).

Kiely's recognition of emotions as essential to the transformation process is important. It suggests that, like other steps in the experience, how one responds emotionally can contribute to or impede the learning experience. He states that "They [students] experience a variety of emotions including shame, guilt, anger, confusion, compassion, denial, and sadness" and he provides observations of student experiences to support this (Kiely, 2005, p. 8).

PROCESSING AFFECT

The emotions and feelings recognized by Kiely have been explored by others who confirm that service learning activities stimulate a wide range of emotional responses in college students. These emotional responses vacillate between "satisfying" and "hazardous" (Carson

& Domangue, 2013; Coles, 1993). They become part of one's "emotional biography" thus establishing an attitude toward future service learning participation; that attitude is either one of approach or avoidance (Carson & Domangue; 2010 Coles, 1993). The emotional responses arise from three possible sources: 1) prior service learning experiences (emotional biography); 2) service learning site expectations or experiences; or 3) a combination of both previous experience and expectations (Carson & Domangue, 2013; Coles, 1993).

According to Coles (1993), the "satisfactions" and "hazards" that result from service experiences are conceptualized as follows. Satisfactions, which provide motivation for future service engagements, include moral purpose, personal affirmation (discovery of one's own personal abilities), stoic affirmation, and a sense of success and advancement. Coles' hazards inhibit service learning and are identified as weariness, cynicism, anger and bitterness toward the problem, despair (deepening sadness toward service recipients), and burnout. Left unprocessed, unpleasant emotional responses drive movement toward disengagement and burnout. With this in mind, attention to service learning emotional responses, as well as awareness of optimal points of intervention, are essential to ensuring the healthy management and processing of students' emotional experiences within service learning activities.

APPRAISAL

Understanding the dynamic, interdependent systems of affect requires attention to the link between appraisal and emotions. The unique way in which an individual processes and appraises an event establishes the emotional experience (Frijda, 1993). Richard Lazarus continues Frijda's emphasis on appraisal by describing emotions as "... the product of reason in that they flow from how we appraise what is happening in our lives" (Lazarus, 1999, p.

87). Within his Cognitive-Motivational-Relational Theory (CMRT), Lazarus defines two types of appraising: primary and secondary.

Primary appraisals assess whether or not the target activity is "relevant to one's values, goal commitments, beliefs about self and the world, and situational intentions" (Lazarus, 1999, p. 76). In other words, primary appraisal takes into consideration: 1) whether the target activity is relevant to personal well-being; 2) whether the target activity facilitates or thwarts a personal goal; and 3) the role of an individual's diverse goals in shaping an emotion. Within this category, unpleasant emotions (Anger, Fear, Anxiety, Shame, Sadness, Contempt, and Disgust) are experienced in response to appraisals of threat, delay, and thwarting or conflict of goals and goal attainment. The pleasant emotion (Happiness) and non-emotions (Surprise and Interest) are experienced in response to goal attainment or potential movement or openness toward it.

Secondary appraisal refers to a cognitive-evaluative process focused on what can be done about a stressful situation, relationship, or activity. Secondary appraising evaluates three basic issues: 1) blame or credit; 2) coping potential; and 3) future expectations (Lazarus, 1999). For example, if self-blame is the emotional appraisal associated with a targeted activity, the resulting emotion could be Shame or inwardly-directed Anger. If, on the other hand, other-blame is the emotional appraisal, the resulting emotion could be Contempt, Disgust, or outwardly-directed Anger. If credit is the emotional appraisal, the resulting emotion would most likely be Happiness experienced as an increased sense of well-being. One's coping potential serves to either diminish or enhance the emotional experience; it also influences the significance of the experience.

Appraisal of prior experiences plays a role in decision-making (Morris, Woo, Geason, & Kim, 2002), and participation in service activities depends on an individual's decision to engage in the activity or avoid it altogether. Further, because service learning experiences often involve activities in emotionally-laden contexts, one would expect the emotional response to influence subsequent participation. To be more specific, activities related to homeless shelters, battered women shelters, and food lines likely have significant emotional impact on students. Despite the evidence that affect influences engagement in service learning, little work has been done to characterize the emotional responses involved. Hunt contends that "essentially nothing has been published about the cognitive, affective or social processes experienced during service learning" (Hunt, 2007, p. 280). According to Langstraat, "most attention to the emotionality of service-learning pedagogies remains undertheorized or only implicitly ad-

ressed in the literature" (Langstraat & Bowdon, 2011, p. 5).

METHODOLOGY

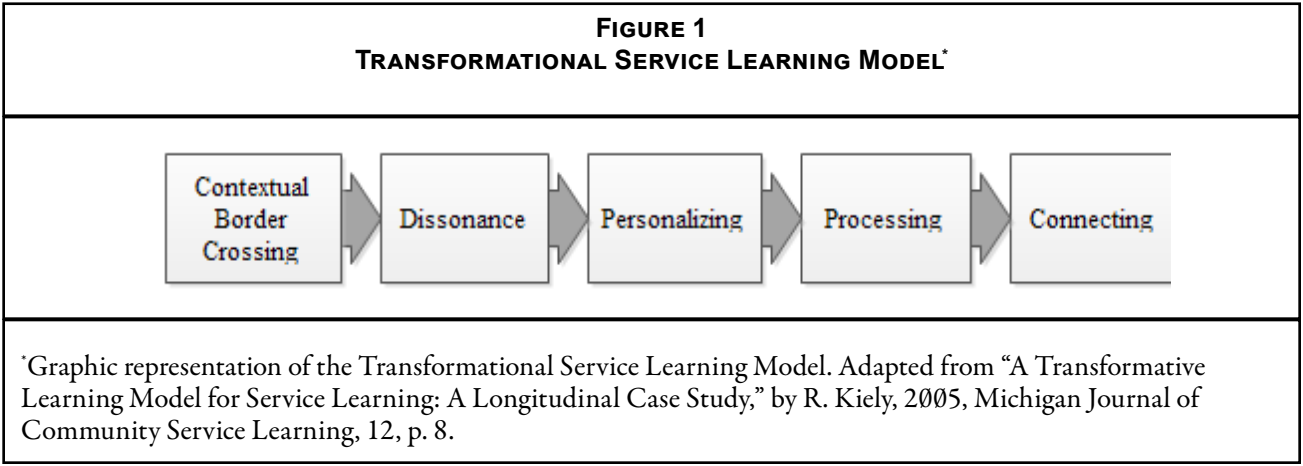
In an effort to identify the specific emotional responses of individuals to service learning experiences, a sample of fifteen students was drawn from an undergraduate program at a private catholic university. Permission for the use of human subjects was received from the university's Institutional Review Board (IRB) subsequent to a formal request by the authors. All authors hold a certificate of completion of human subjects training from the NIH Office of Extramural Research.

Emogram, an interactive computer program, was used to measure emotional responses to service learning experiences (Priesmeyer, 2011). The program assesses eleven basic emotions through the presentation of 33 facial photograph depicting low, medium and extreme expression of each emotion. The subject responds by indicating the extent of concurrence with each photograph. The assessment solicits affective responses and has been used as the primary data collection instrument in a variety of doctoral dissertations (Mudge, 2003; Capps, 2005; McGinnis, 2008; & Edralin, 2010). Measures of emotions are computed as the change in response to a stimulus. This is done by first establishing baseline measures for each individual, providing the stimulus (i.e., the recall of a service learning activity), and then measuring the emotions again in a post-test. Emogram reveals the emotional responses that result from exposure to the stimulus.

Table 1 provides a list of the basic emotions measured by Emogram and an interpretation of each one. The interpretations are not arbitrary; instead they are based on a review of the literature on human emotions (Darwin, 1897; Izard, Ackerman, Schoff, & Fine, 2008; Lowenstein 2001; Plutchik, 1994; Shalif, 1991). The meaning of each emotion in Table 1 is based on an increase in that emotion.

Subjects were qualified by confirming that they had engaged in service learning activities within the past two years. They then completed IRB consent requirements and were administered the Emogram pre-test. Each subject was asked to recall a particular service learning activity and was given time to recall the details of that experience. The Emogram post-test was then administered, and results were shared with the subject.

Two hypotheses were constructed for each of the eleven emotions. It was anticipated that service learning experiences would have a significant emotional impact although no attempt was made to specify whether that impact would result in a decrease or increase of each emotion. The first set of hypotheses, therefore, were tests of the means



between the pre-test and post-test emotion scores with the null hypothesis declaring there would be no significant change and the alternate hypotheses defining a significant change in either direction. A two-tailed *t*-test provides the test statistic.

Ha1: Service learning experiences have an emotional impact. The mean value of post-test emotion scores will differ significantly from the mean values of the pre-test emotion scores.

It was also suspected that individual subjects would respond differently to service learning activities. Therefore tests were conducted to identify significant changes in the variance between the pre-test and post-test scores for each emotion. Specifically, it was expected that some individuals may have had substantial emotional service learning experiences that would cause them to respond more pro-

foundly than others, resulting in an increase in the variance of the post-test measures compared to the variances in the pre-test. Thus, the null hypotheses declare no difference in the variance between the pre-test and post-test scores and the alternate hypotheses define a significant difference as measured by an F-test on each emotion. The significance level for all of these tests was set at 95% (*p*-value=.05).

Ha2: Individuals will respond differently to service learning experiences. The variance of post-test emotion scores will be greater than the variance of pre-test emotion scores.

RESULTS

Figure 2 provides the mean emotional responses for the subjects in the study. The notable increase in Surprise is apparent along with increases in each of the unpleasant emotions of Contempt, Disgust, Shame, Fear, Anger, Anxiety, Distress and Sadness. Happiness, the only pleasant emotion, declined while Interest showed only a minor increase. Taken collectively, this response profile lacks anything positive and includes increases in every unpleasant emotion. While individual student responses differed, the profile in Figure 2, which is based on the means of all subjects, suggests considerable dissonance exists. Substantial processing of these emotional responses would be necessary to transform these service learning events into positive learning experiences.

Table 2 provides the specific pre-test and post-test mean scores for each emotion along with the test statistics. Significant results are highlighted in bold type. Note that significant differences in the mean scores were found for Surprise (*p*=.00), Anxiety (*p*=.02) and Distress (*p*=.04). A comparison of the pre-test and post-test mean scores shows that there was a significant increase in each of these three emotions. We can, therefore, accept our first alternate hypothesis and conclude that service learning does have a significant emotional impact. For this sample, that impact consisted of increases in Surprise, Anxiety and Distress. While not significant at the .05 threshold level, Shame and Fear have *p*-values of .06 and .07 suggesting these two emotions may also be important responses.

The second set of hypotheses addresses the differences in variance between the pre-test and post-test data to test the expectation that individuals will respond differently to service learning experiences. Here, three emotions, Contempt, Disgust, and Fear were significant with differences at *p*=.01. An examination of the test results reveals that the variances for these three emotions increased. The second alternate hypothesis is therefore accepted providing

FIGURE 2
CHANGES IN MEAN EMOTION SCORES IN
RESPONSE TO RECALL OF SERVICE LEARNING EXPERIENCES

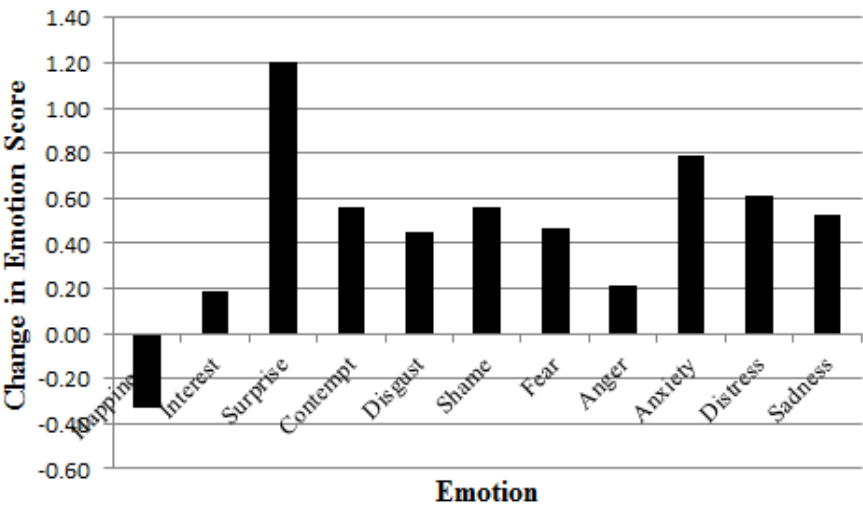


TABLE 2
EMOTION SCORES AND TEST STATISTICS

Emotion	Happiness	Interest	Surprise	Contempt	Disgust	Shame	Fear	Anger	Anxiety	Distress	Sadness
Mean (pre)	4.65	3.35	1.82	1.44	1.35	2.70	1.41	1.64	2.11	1.82	2.23
Mean (post)	4.32	3.54	3.02	2.00	1.80	3.26	1.88	1.85	2.90	2.43	2.75
t-test <i>p</i> -value	0.34	0.53	0.00	0.12	0.14	0.06	0.07	0.26	0.02	0.04	0.16
Variance (pre)	0.88	1.87	0.84	0.28	0.21	1.41	0.18	0.45	0.53	0.70	1.15
Variance (post)	0.83	1.02	2.35	1.30	1.01	1.26	0.90	0.65	1.41	1.04	1.28
f-test <i>p</i> -value	0.91	0.27	0.06	0.01	0.01	0.83	0.00	0.50	0.08	0.46	0.84

evidence that individuals respond differently to service learning experiences. While this result is as anticipated, this may be a particularly important finding because it suggests that service learning experiences relate to individuals in profoundly unique and personal ways. For example, interacting with the homeless or abused would undoubtedly trigger emotional responses in individuals who have been personally affected by these conditions while other participants may remain largely unaffected.

DISCUSSION

Using Lazarus' Cognitive-Motivational-Relational Theory (CMRT), emotional changes can first be examined to determine whether the subject is engaged. This reveals whether the student perceives the experience as relevant. If activities are considered relevant, pre-test and post-test Emogram assessments would show changes across at least

some of the eleven emotions. In other words, individuals respond emotionally to that which is considered relevant, meaningful, and/or worthy of attention. Scores for Surprise, Anxiety and Distress show significant changes thus indicating that the targeted activities are deemed relevant and that engagement exists. The fact that there are also significant inter-individual differences suggests varying levels of relevance among the individuals in the sample.

The significant emotional responses in this study can be discussed within the CMRT framework. Surprise, a pre-motion, isn't considered positive nor is it considered negative. Surprise does, however, reflect an unprepared openness or vulnerability to a targeted activity. An increase in Surprise indicates that the participants were "caught off-guard" or ill-prepared for the targeted activities. Increases in Surprise across participating subjects suggest that better pre- engagement orientations are needed to ensure that students are fully prepared for their service learning experiences.

riences. Additionally, more extensive debriefing is apparently needed to help students process the service learning experiences.

Anxiety is an emotional response based on the appraisal of an uncertain, existential threat. Anxiety occurs when an individual appraises a situation as 1) relevant; 2) incongruent or threatening to goal attainment; and 3) there is no obvious person or group to hold accountable or blamed for a wrongdoing. Increases in Anxiety across participating subjects indicate lack of known structure and direction, diminished self-efficacy, disorientation, panic, and a desperate need for outside guidance and support. Within a service learning setting, the participant needs to process the free-floating fear in an effort to define the problem and identify coping strategies or possible courses of action. Left unaddressed, Anxiety escalates and may cause the individual to disengage and withdraw as a means of self-protection and avoidance.

Distress, an uneasiness or discomfort due to perceived inadequacies or imperfections of the self, often coexists with Shame. Distress prompts individuals to step away from situations or step into the shadows in hopes that others will not see their flaws. Self-perceived inadequacies and flaws must be acknowledged and addressed in order for the individual to move to an improved state of self-worth. Within the service learning setting, Distress is one of the most common and difficult emotional states to address. Wanting to appear competent and gain the respect of others, students are often unwilling to share deficits and perceived inadequacies. Group processing of service experiences must be done in a way that is accepting of mistakes, perceived inadequacies or flaws and supportive and encouraging of the personal and professional growth of participants.

The literature on burnout can provide guidance in this matter. It can help identify optimal points for early intervention with the goal of curbing emotional exhaustion and depersonalization while supporting personal accomplishment and engagement. Burnout is described as consisting of three dimensions: emotional exhaustion, depersonalization, and lack of personal accomplishment (Maslach & Jackson, 1986; Maslach & Schaufeli, 1993). Burnout theory likely offers the appropriate field of inquiry to better understand when and how to intervene and how to effectively process the emotional responses associated with service learning experiences.

Encouraging service learning, or requiring it, carries with it an ethical obligation to protect those who engage in it. However, it inevitably exposes some individuals to emotionally significant circumstances because much of the activity is outside the control of the educational institution. Unpleasant experiences work against continued engage-

ment. In some cases, a required service learning experience may compound previous emotional and psychological traumatization for a student. Wendler proposes that “the human subjects research protection tradition may inform the field of service learning about principles for ethical community engagement” and offers guidelines for doing so (Wendler, 2012, p. 30).

The significant results identified here suggest that service learning activities may need an enhanced structure modeled after Wendler’s human subjects protection principles. Additionally, a lack of infrastructure, inadequate preparation, and incomplete debrief sessions may explain why there is such a low participation rate among college students. One should recognize that these results are based on the recall of a service learning experience; one would expect that the experience itself offers a far richer context and stronger emotional reaction. Regardless, the emotional responses shown here reveal the nature of the memories retained by the individuals tested. The following comment from Carnegie Mellon’s Eberly Center for Teaching Excellence & Educational Innovation captures the central issue here.

Service learning is a potentially rich educational experience, but without careful planning, students can wind up learning far less than we hope or internalizing exactly the opposite lessons we intend. (“Service Learning,” n.d., para. 2)

These findings have implications for all those who advocate, require, or manage service learning. Those responsible for university service learning experiences should examine existing programs and ask “What preparation is provided to students for the situations they will likely experience?” “What support is available during and after these activities and how is that support structured?” “What attention is given to the individual backgrounds and differences that may cause some students to understandably avoid certain activities?” Most importantly, “How do service learning experiences connect with the educational objectives of the institution and the career goals of the students?” These questions deserve attention given evidence that the emotional responses to service learning are significant and that future engagement by those who participate likely depends on how service learning activities are managed.

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